

FIRST RECORD OF THE GENUS ATYLOMYIA IN CHINA WITH TWO NEW SPECIES (DIPTERA, TACHINIDAE)

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Abstract *Atylomyia* Brauer of the tribe Ethillini of Exoristinae (Diptera, Tachinidae) is recorded from China and the Oriental Region for the first time, and two species are described as *A. minutiungula* Zhang et Wang, sp. nov. and *A. chinensis* Zhang et Ge, sp. nov., and a key to all known species of *Atylomyia* is provided.

Key words Tachinidae, *Atylomyia*, new record, new species, China.

1 Introduction

Atylomyia Brauer, 1898 is a small genus of the tribe Ethillini of Exoristinae (Diptera, Tachinidae), in which three species were found in the Palaearctic Region (Herting & Dely-Draskovits, 1993). *Atylomyia* was redescribed by Mesnil (1975), who keyed *A. rungsi*, *A. laewi* and *A. albifrons* and described or redescribed them in detail. Herting & Ludwigsbury (1981) treated *A. rungsi* as a synonym of *A. albifrons* and described *A. mesnili* as a new species from Greece, Tajikistan and Transcaucasus. *Atylomyia* has following diagnostic characters (Tschorsnig & Richter, 1998): small flies, eye bare, bend of vein M right angle, parafacial narrowed anteriorly, antennae broad, first flagellomere 3 to 6 times as long as pedicel, second aristomere 4 to 6 times as long as wide, fore tibia with 1 posteroventral seta; middorsal depression on abdominal syntergite 1 + 2 extending to posterior margin of the syntergite, tergites 3 and 4 without discal seta.

In this study, *Atylomyia* is newly recorded China and the Oriental Region, and two species are described as new to science. A key to all known species of *Atylomyia* is provided.

2 Materials and Methods

The specimens used in this study are housed in the Insect Collection of Shenyang Normal University, Shenyang, China (SNUC). Terms follow McAlpine (1981) and Sinclair (2000).

3 Key to Species of the Genus *Atylomyia* Brauer

(Revised after Mesnil (1975), Herting (1981) and Tschorsnig & Herting (1994))

- 1 Vertex of male about 0.75 eye width, frontal vitta at most as wide as fronto-orbital plate at level of anterior ocellus; first flagellomere 3 times as long as pedicel; lowest frontal seta extending to level of apex of pedicel; 2 + 3 dorsocentral setae (δ); claw and pulvillus of male longer than 5th tarsomere; fronto-orbital plate of female wholly covered with pruinosity, ocellar triangular region about 2/5 frons length, seta-like hairs on wholly

- tergites 4 and 5 (France, North Africa, Israel)
..... *A. albifrons* Villeneuve
Vertex of male at least 0.9 eye width; frontal vitta at least as wide as fronto-orbital plate; first flagellomere 3.5-6.0 times as long as pedicel; lowest frontal seta at level of arisal base or below; 2 + 3-4 or 3 + 4 δ 2
- 2 Vertex of male slightly more than eye width, frontal vitta about 1.5 times as wide as fronto-orbital plate; 3 + 4 δ ; first flagellomere of male 5-6 times as long as pedicel; claw and pulvillus of male shorter than fifth tarsomere3
Vertex of male 0.9-1.0 eye width; 2 + 3-4 δ ; scutellum with 3 pairs of marginal setae; claw and pulvillus of male equal to or shorter than 5th tarsomere4
- 3 Scutellum with 3 pairs of marginal setae; palpi dark brown; abdominal syntergite 1 + 2 with 2 median marginal setae in both sexes. Shanxi, Guangxi of China *A. chinensis* Zhang et Wang, sp. nov.
Scutellum with 4 pairs of marginal setae; palpi reddish yellow; abdominal syntergite 1 + 2 without median marginal seta. Tibet of China
..... *A. minutiungula* Zhang et Ge, sp. nov.
- 4 2 + 3 δ ; claws and pulvilli of male shorter than 5th tarsomere; frontal vitta about as wide as fronto-orbital plate, ocellar region about 1/3 length of frons; first flagellomere 4.5 times as long as pedicel. Greece, Transcaucasus, Tajikistan *A. mesnili* Herting
2 + 4 δ ; claws and pulvilli of male as long as 5th tarsomere; frontal vitta 1.5-2.0 times as wide as fronto-orbital plate; ocellar region about 1/2 length of frons; first flagellomere 3.5 times as long as pedicel. Europe, Israel, Siberia of Russia, Mongolia *A. laewi* Brauer

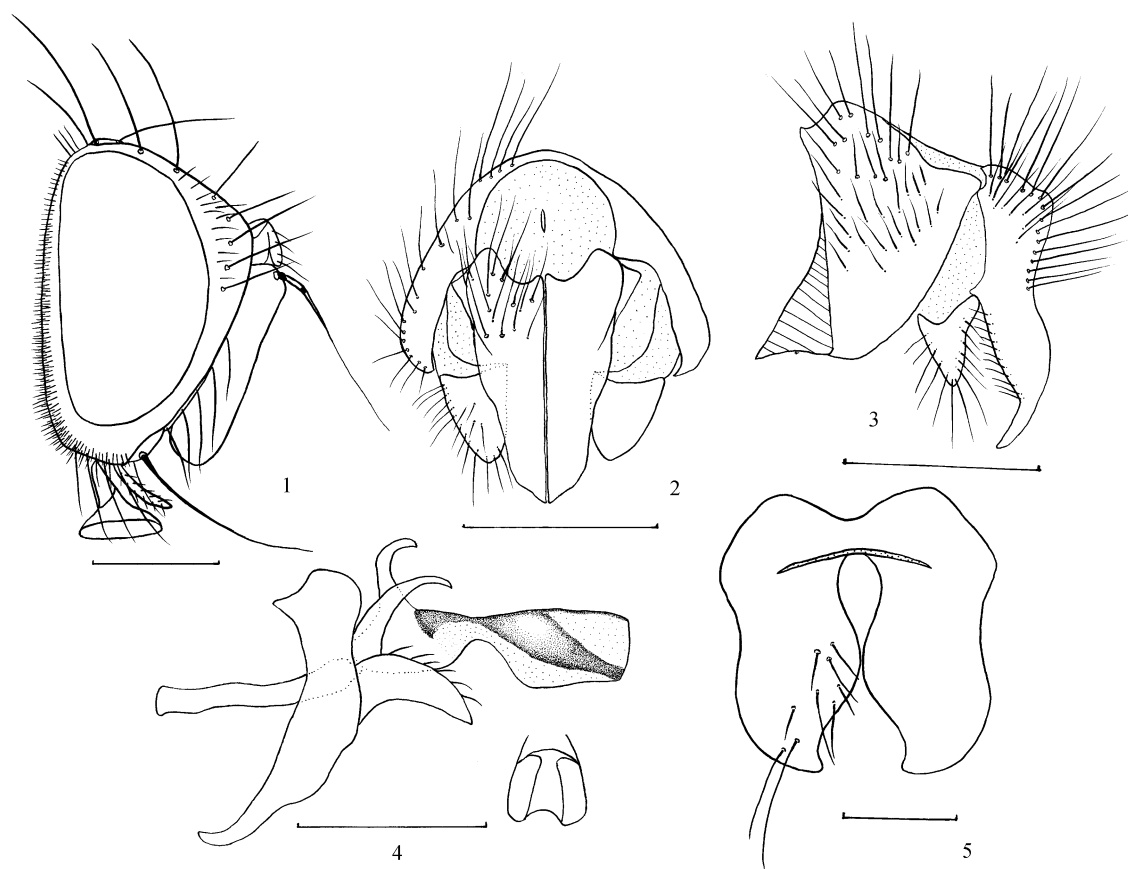
4 Descriptions

4.1 *Atylomyia minutiungula* Zhang et Wang, sp. nov. (Figs. 1-5)

Diagnosis. Body small, head wider than body; male frons wider than eye; antennae broad; 3 + 4 δ ; scutellum with 4 pairs of marginal setae; claws and pulvilli short.

Type material. Holotype, China, Beibeng (29°N, 95°E, 780 m), M dog, Xizang Autonomous Region (Tibet), 11 Aug. 2003, WANG Ming-Fu. Paratype 1, same data as holotype (SNUC). Length 4.2-4.5 mm.

Male. Head semi-sphere, wider than thoracic body. Frontal vitta dark brown, upper fronto-orbital plate brownish, fronto-orbital plate and parafacialia densely



Figs. 1-5. *Atylonia minutiungula* sp. nov. 1. Head of male in profile. 2-3. Cerci, surstyli and epandrium in dorsal view and profile. 4. Hypandrium, pregonite, postgonite and phallus in profile. 5. Sternite 5 in ventral view. Scale bars: 1 = 0.5 mm, 2-5 = 0.2 mm.

covered with grayish white pruinosity; occiput black, covered with densely grayish white pruinosity. Antenna and arista dark brown; palpus reddish yellow; prementum gleaming black. Eye bare. Vertex slightly wider than eye, about 0.36 head width at narrowest point; frontal vitta narrowed anteriorly, about 1.5 times as wide as fronto-orbital plate at middle; parafacial slightly narrowed ventrally, about 1/3 width of first flagellomere at middle in profile; face concave, lower margin of face not protruding forward; gena height 1/8-1/7 eye height; occiput flattened, upper occiput with a row of black hairs behind postocular setae. Fronto-orbital plate with some hairs out of frontal setae, parafacial bare; facial ridge with strong setae on upper 2/3. Inner vertical seta well developed, about 0.6 eye height, outer vertical seta upward, 0.6-0.7 length of inner one, ocellar seta strong, situated at level of anterior ocellus; 5 frontal setae inclinate, lower three extending to parafacial, lowest seta below level of arista base, two reclinate upper orbital setae, anterior one stronger, about as long as inner vertical seta; vibrissa strong, inserted at level of lower margin of face. Antenna broad, almost falling short of lower margin of face; first flagellomere about 3.3 times as long as wide, and about 5.0 times as long as pedicel; arista situated upper margin of first flagellomere, bare,

about as long as antenna, thickened at basal 1/3; first aristomere about as long as wide, second aristomere 4-5 times as long as wide; palpus slightly longer than prementum, the latter 2.5-3.0 times as long as wide; labella large.

Thorax black, covered with sparsely gray pruinosity, with five dark black longitudinal vittae on dorsum, inner vitta narrower, about 2/3 width of pruinose portion between inner and outer vittae on prescutal region; scutellum brownish pruinose, its length about equal to basal width; pleura gray pruinose. Prosternum broad, hairy; postpronotum with 4 setae, antero-inner one weaker, posterior three arranged nearly in a straight line, postero-inner one weaker; 3 + 3 acrostichal setae, first one weaker on prescutal region; 3 + 4 δ , 1 + 3 intra-alar setae, 3 supra-alar setae, anterior one weaker than posterior two and first ia seta on postscutal scutum; proepisternum bare; anepimeron with 1 seta; katepimeron at most with 3-4 hairs on anterior portion; 2 + 1 katepisternal setae; scutellum with 4 pairs of marginal scutellar setae, apical scutellar setae crossed and weaker, 0.7-0.8 length of scutellum; subapical scutellar seta strong, about 1.3 times as long as lateral scutellar seta.

Wings hyaline, brownish; tegula and basicosta dark

black; costal spine as long as or longer than crossvein $r-m$, relative lengths of second, third and fourth costal section approximately 1.0 2.4 1.2; base of vein R_{4+5} with 2-4 setulae dorsally and ventrally; cell r_{4+5} narrowly opened at apex; vein M_{1+2} nearly right angle at bend, with a short stub; length of vein M_{1+2} from discal crossvein to its bend 1.2 times as long as that from bend to apex of M_{1+2} , about 2.2 times as long as distance between bend and wing margin; ultimate section of CuA_1 about 1.2 times as long as crossvein $dm-cu$. Halter brown at base and dark brown at apex. Calypters yellowish, lower calypter slightly convex.

Legs black, claw black, pulvilli pale yellow, claw and pulvillus shorter than 5th tarsomere. Fore tibia with a row of short anterodorsal (ad) and 1 posterior (p) setae, at apex with 1 ad, 1 dorsal (d) and 1 posteroventral (pv) setae; mid femur with 1 anterior (a), 2 ad setae on median portion and 3 erect pv on basal 1/3; mid tibia with 2 ad, 2 p and 1 ventral (v), apex with 1 a, 2 d and 2 v; hind femur with a complete row of ad and a row of 4 sparse and long anteroventral (av), 2 pv on basal half; hind tibia with 4 av, lower one strong, upper three shorter, a row of ad in which middle two stronger, and 3 pd, upper two shorter, lower one stronger; apex with 1 av and 3 d, posterior one of d finer and shorter.

Abdomen long ovoid, black in ground color, covered with sparsely gray pruinosity, anterior 1/3-1/2 of tergite 3, anterior 1/2-2/3 of tergite 4, and anterior 1/2 of tergite 5 covered with gray pruinosity. Abdominal tergites with appressed seta-like hairs; middorsal depression on abdominal syntergite 1 + 2 extending to its posterior margin, without median marginal seta; tergite 3 with 2 median marginal and 1-2 lateral marginal setae, without discal seta; tergite 4 with a row of marginal setae, without discal seta; tergite 5 distinctly shorter than tergite 4, with a row of short discal and long marginal setae. Sternite 5 nearly square, median cleft deep, about 3/4 of the sternite length, lateral lobe blunt and wide, slightly pointed at inner apex. Male terminalia. In dorsal view epandrium broad in lateral and narrowed in mid-dorsal surfaces; cerci wide and blunt, only narrowed at apex, extending beyond surstylus, surstylus distinctly short, wide and bluntly round. In profile cerci distinctly narrowed and curved ventrally at apex, surstylus small, triangular, strongly narrowed apically; postgonite broad with some seta-like hairs dorsally, bent outward and pointed at apex; pregonite hook-like strong, slender and bent posteriorly; phallus short and sclerotized dorsally, membranous on ventral and posterior upper-lateral surface, basiphallus with a sclerotized dorsal process which narrowed apically and bent posteriorly, aedeagal apodeme slender, hypandrium broad.

Female. Unknown.

Etymology. Specific epithet Latin adjective *minutus* (= minute) plus noun *ungula* (= claw), referring to the short and small claw of male.

Remarks. This species is similar to *A. mesnili* Herting, 1981, but can be distinguished from the latter by the vertex wider, frontal vitta about 1.5 width of fronto-orbital plate, 3 + 4 dc and lateral scutellar setae present.

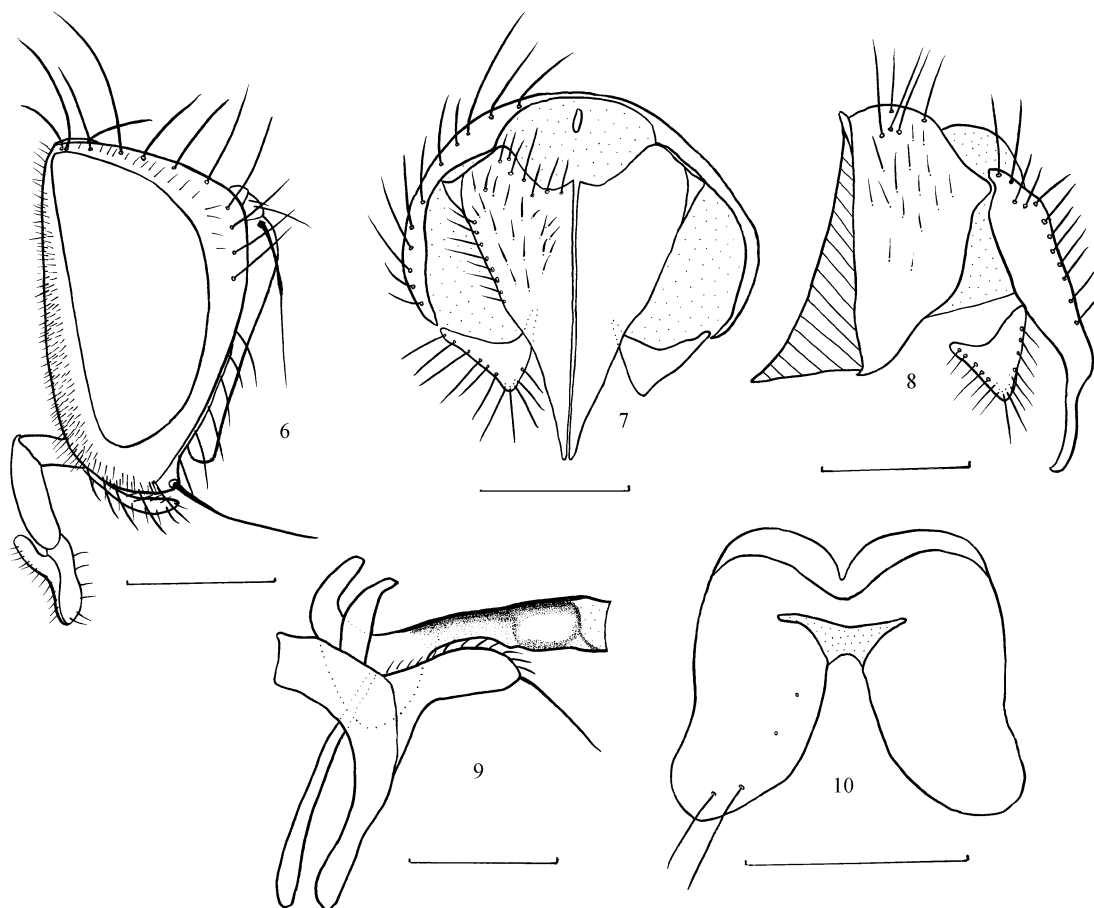
4.2 *Atylomyia chinensis* Zhang et Ge, sp. nov. (Figs. 6-10)

Holotype , China, Shixia Reservoir (37°10' N, 105°50' E), Zuoquan, Shanxi, 13 June 1999, WANG Ming-Fu. **Paratypes**: China, 1 , Defu (23°30' N, 113°20' E, alt. 1350 m), Napo, Guangxi, 19 June 2000, YAO Jian; 1 , Haizi, Guangling, Shanxi, 5 Sep. 1982, WANG Ming-Fu; 1 , Ehutan, Xing Xian, Shanxi, 5 June 1984, WANG Ming-Fu (SNUC).

Length 4.2-5.5 mm. Closely resembling *D. lativittata* sp. nov., but differing as follows: vertex 0.38-0.40 (male), 0.36-0.39 (female) head width at narrowest point; palpus dark brown in male, brown in female; first flagellomere about 6 (male) and 4 (female) times as long as pedicel; inner vertical seta well developed, about 0.5 eye height, outer vertical seta upward, 0.6 length of inner one, two reclinate upper orbital setae, anterior one stronger, about 0.8 length of inner vertical seta. Dark longitudinal inner vitta 0.6 (female) -1.0 (male) width of pruinose portion between inner and outer vittae on prescutal region; scutellum with 3 pairs of strong marginal scutellar setae, apical scutellar setae absent. Vein R_{4+5} with 2-4 ventral setulae at base, and dorsal setulae at most extending to $r-m$ crossvein; length of vein M_{1+2} from discal crossvein to its bend slightly shorter than that from bend to apex of M_{1+2} , about 1.6 times as long as distance between bend and wing margin. Abdominal syntergite 1 + 2 with 2 median marginal setae in both sexes. V-shaped median cleft of sternite 5 deep, apex of lateral lobe bluntly rounded and bent outward. Male terminalia. In dorsal view cerci triangular, pointed at apex, extending beyond surstylus, surstylus short, subtriangular, slightly pointed at apex. In profile cerci distinctly narrowed and curved ventrally at apical 1/3, surstylus small, triangular, narrowed apically; postgonite broad with some seta-like hairs dorsally, apex with a strong spine-like setae; pregonite hook-like and bent posteriorly; phallus short and sclerotized dorsally, membranous on ventral and lateral surface, basiphallus with a strong sclerotized dorsal process narrowed and bent apically.

Etymology. Specific epithet is taken from the type locality of this species.

Remarks. This species is similar to *A. minutiungula* sp. nov. but can be distinguished from the having palpi dark; apical scutellar seta absent, abdominal syntergite 1



Figs. 6-10. *Atylomyia chinensis* sp. nov. 6. Head of male in profile. 7-8. Cerci, surstyli and epandrium in dorsal view and profile. 9. Hypandrium, pregonite, postgonite and phallus in profile. 10. Sternite 5 in ventral view. Scale bars: 6 = 1.0 mm, 7-10 = 0.2 mm.

+ 2 with 2 median marginal setae in both sexes.

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中国新纪录大角寄蝇属二新种（双翅目，蝇科）

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摘 要 大角寄蝇属 *Atylomyia* 是追寄蝇亚科拱瓣寄蝇族的一个小属，其体小，眼裸，触角宽大，触角芒第2节长为宽的4~6倍，M脉弯曲处呈直角，前胫具1后鬃，腹部第1+2背板中央凹陷伸达后缘，中间背板无心鬃；已知3种，均分布于古北区。本文首次报告采自我国山西，广西和西藏的大

角寄蝇属，并记述了2新种：小爪大角寄蝇 *Atylomyia minutiungula* Zhang et Wang, sp. nov. 和中华大角寄蝇 *A. chinensis* Zhang et Ge, sp. nov.，并编制了该属分种检索表；新种模式标本保存在沈阳师范大学昆虫标本室。

关键词 寄蝇科，大角寄蝇属，新纪录，新种，中国.

中图分类号 Q969.453.8